

that the leaves of the Japanese *Acer carpinifolium* Sieb. & Zucc. which I saw growing in Kew Gardens, were those of a maple? I could hardly believe my eyes, but there were the maple fruits.

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BOOK REVIEWS

A TEXTBOOK OF GENERAL BOTANY FOR COLLEGES AND UNIVERSITIES*

This new textbook by Holman and Robbins is well planned and clearly written. It gives the student a general survey of the field and at the same time is not too comprehensive to serve as a general text for the first year of college botany. The book is divided into two parts. Part I deals with the higher plants, starting with the single cell and then taking up the different portions of the plant. Part II commences with the lower forms and works upward to the seed plants. It includes as well a chapter on heredity and evolution. This plan would seem to be the most logical way to attack the subject, since the higher plants are perhaps the first to attract the attention of the elementary student and at the same time they give an easy avenue of approach to the more lowly organized forms.

Each chapter has an outline of the contents at the beginning with reference to the pages where the subject is treated. This makes an excellent outline for study, showing the main divisions and the relation that the topics bear to one another. The book is well and fully illustrated and the drawings carefully labeled. Structure is discussed first, in order that the student may have a clear idea of the function, which is not left for a separate chapter, but the physiology of the organ is taken up immediately after its morphology. While morphology is so well and clearly dealt with physiology is not neglected, for there is a considerable amount of space devoted to the latter. This is a decided step in the right direction, since this side of the problem is very often overlooked, or rather poorly treated in an elementary course in botany. The authors have succeeded in giving us a well balanced

* Holman, Richard M. and Robbins, Wilfred W. A textbook of general botany for colleges and universities. 590 pages. John Wiley & Sons. New York. 1924. \$4.00.

text combining so much physiology and morphology with other branches of botanical science. The book has a great deal to recommend its adoption in those colleges in which a text is used.

C. L. CAREY.

THE NEW ENGLAND-ACADIAN SHORE LINE*

The book treats of the development of the shore line, its relation to rock structure, and especially to the geological and physiographic history of the region. Of local interest is the tracing of similarities between the Hudson River-Newark Bay region, the Connecticut Valley and the Bay of Fundy in all of which trap ridges, cut across diagonally by faults, form one part of the shore line. Glacial action, except by deposition, has had slight effect on the coast line, deep narrow bays frequently referred to as fjords being drowned river valleys. The only examples of true fjords are in the Mount Desert Island embayment and the drowned gorge of the Hudson in the Highlands. The general conclusion is drawn that the shore line is extremely youthful, only a few thousand years at, or near, the present level. In the softest rocks the wave erosion has cut only a thousand feet or so, while the amount of beach and bar building, even when using material furnished by the glaciers, is comparatively slight. The coast north of New York is one of recent submergence, reaching at least twelve hundred feet in the northern part, while to the south it is one of emergence. There was probably a long-enduring costal plain from New Jersey and southward to beyond Newfoundland at least to the close of the Tertiary period. This physiographic history seems to offer a reasonable explanation of the facts described by Hollick and Fernald of the occurrence of Pine Barren plants along the coast as far north as Newfoundland.

Of chief interest botanically are the chapters on costal marshes and swamps. Three types of marshes are distinguished along the Atlantic Coast, differing in the composition of the sub-soil, peat or silt in various mixtures. While these different types are somewhat unlike in appearance they have had similar histories.

* Douglas Johnson, *The New England-Acadian Shore Line*, pages xx, 608, John Wiley and Sons, New York, 1925. Price \$8.50.